

Preface

The papers in this edition of the *Australian Zoologist* were presented at a workshop held in Brisbane at the University of Queensland in February 1998. Specifically the workshop aimed to:

1. review current monitoring in the states where kangaroos are commercially harvested,
2. discuss recent developments in aerial survey methods, and
3. identify areas for further investigation.

Participants at the workshop included managers from each of the states where kangaroos are commercially harvested, people involved in the regular aerial surveys of kangaroos and researchers attempting to further develop survey techniques.

Kangaroo populations can be monitored directly using ground (on foot or by vehicle) and aerial survey methods or monitored indirectly using counts of signs such as pellets or using harvest statistics. Harvest statistics are collected by all relevant state management authorities and are used as an adjunct to direct monitoring methods. Ground counts are used for monitoring kangaroo populations in forests and woodlands of eastern Australia and monitoring harvested wallaby populations in Tasmania. However, most of Australia's kangaroo population occurs west of the Great Dividing Range in the rangelands and it is here that the harvest is concentrated. The relatively flat terrain and sparse vegetation makes this habitat amenable to aerial survey which has become the principal method for monitoring harvested populations of kangaroos.

It is more than 20 years since aerial surveys were introduced for the broad-scale monitoring of kangaroo populations. A strictly standardized technique was adopted that has been widely accepted both in Australia and overseas. However, further research into aerial survey methods has continued, and it is probably desirable to implement some of the more recent findings, particularly those to do with correction factors. Clearly, piecemeal implementation would only cause confusion; hence the continued reference of all survey results to the original work by Graeme Caughley and co-workers.

When the idea for a workshop was first floated, it was thought it might provide a venue for discussions leading to the adoption of an agreed new set of correction factors for grey kangaroos. However, further experimental work is planned in New South Wales, so new correction factors should only be seen as interim. Rather, the workshop provided an opportunity to help shape this experimental work and look more widely than just at correction factors and just at New South Wales. For example, any move to regionalization may require different sampling intensities, and alternative survey methodology may be more appropriate. It was hoped, therefore, that the workshop would work out ways of improving the current system of monitoring commercially harvested kangaroo populations throughout Australia.

Gordon Grigg chaired the workshop and provided valuable assistance with its organization and preparing these proceedings for publication. The proceedings were improved by comments from Dan Lunney and Martin Denny.

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